## ThinkServer TS460 Platform Specifications

Components	Specification								
D:	42L tower or 4U							(0.04.1.) =	
Dimensions	Height: 443.5 mm (17.46 in) with foot stands. Width: 173 mm (6.81 in). Depth: 593						93		
	mm (23.35 in) including front door and handle of hot-swap power supply								
Weight	Maximum configuration: 57.32 lb (26.5 kg)								
	Supports one of the following Intel "Kaby Lake" processors:								
	Xeon E3-1280 v6 4C/3.9GHz/8MB/72W/DDR4-2400								
	Xeon E3-1270 v6		tz/8MB/72V						
	Xeon E3-1240 v6	4C/3.7GF	lz/8MB/72V	V/DDR4-	2400				
	Xeon E3-1230 v6		lz/8MB/72V						
	Xeon E3-1220 v6		/8MB/72W/I						
	Core i3-7320   2C/4.1GHz/4MB/51W/DDR4-2400   Core i3-7300   2C/4GHz/4MB/51W/DDR4-2400								
	Core i3-7300T 2C/3.5GHz/4MB/35								
	Core i3-7100 2C/3.9GHz/3MB/51W/E								
	Core i3-7100T         2C/3.4GHz/3MB/35W/DDR4-2400           Pentium G4620         2C/3.7GHz/3MB/51W/DDR4-2400								
	Pentium G4620								
	Pentium G4600         2C/3.6GHz/3MB/51W/DDR4-2400           Pentium G4600T         2C/3GHz/3MB/35W/DDR4-2400								
	Pentium G4560 2C/3.5GHz/3MB/54W/DDR4-2400								
D	Pentium G4560T 2C/2.9GHz/3MB/35W/DDR4-2400								
Processor	Supports one of the following Intel "Skylake" processors:								
	Xeon E3-1280 v5	4C/3.7GF	Iz/8MB/80V	V/DDR4-	2133				
	Xeon E3-1270 v5	4C/3.6GF	tz/8MB/80V	V/DDR4-	2133				
	Xeon E3-1240 v5		Iz/8MB/80V						
	Xeon E3-1230 v5		1z/8MB/80V						
	Xeon E3-1220 v5 4C/3GHz/8MB/80W/DDR4-2133 Core i3-6320 2C/3.9GHz/4MB/51W/DDR4-2133								
	Core i3-6300T 2C/3.3GHz/4MB/35W/DDR4-2133								
	Core i3-6300	2C/3.8GF	lz/4MB/51V	V/DDR4-	2133				
	Core i3-6100T 2C/3.2GHz/3MB/35W/DDR4-2133								
	Core i3-6100         2C/3.7GHz/3MB/51W/DDR4-2133           Pentium G4520         2C/3.6GHz/3MB/51W/DDR4-2133								
	Pentium G4520 Pentium G4500T		/3MB/35W/I						
	Pentium G4500		lz/3MB/51V						
	Pentium G4400T	2C/2.9GF	Iz/3MB/35V	V/DDR4-	2133				
	Pentium G4400		lz/3MB/54V						
Chipset	Intel C232 Platform Controller Hub (PCH)								
Memory DIMMs	4 DIMM sockets with 2-channels. UDIMM. DDR4-2133 or DDR4-2400								
Memory capacity	Up to 64GB (160	GB x 4)							
Memory protection	ECC								
	RAID controll	er	Drive ty	ne			RAID s	support	
	Onboard RAID1		bs SATA		0/1/5/				7
D. 1. II	RAID520i PCle			/SATA			option	al key	
RAID controller	RAID520i PCIe 12Gbs SAS/SATA 0/1/10, 5 with optional key RAID720i PCIe 12Gbs SAS/SATA 0/1/10/5/50, 6/60 with optional cache								
	Optional cache for RAID720i: 1GB memory, or 1GB, 2GB, 4GB flash with super ca pacitor.								
	Supports one of	the follo	wing cor	nfigura	tions:				
	Disk bays o	onfiguret	ion		VID.	Optical		Tape drive	
	-				roller		RDX	LTO	
	4x3.5" SATA				21i	up to 2			
	4x3.5" SAT				21i	up to 2			
Disk drive bays	4x3.5" SATA/				r 720i	up to 2			
	8x3.5" SATA/ 8x2.5" SATA/				or 720i or 720i	up to 2 up to 2			
	16x2.5" SATA								
	4x3.5" + 8x2.5" SATA/SAS hot-swap   520i or 720i   up to 2   up to 1   -								
	4 x 3.5" HS can be upgraded to 8 x 3.5" HS or 4 x 3.5" + 8 x 2.5" HS,								
	8 x 2.5" HS can be upgraded to 16 x 2.5" HS or 4 x 3.5" + 8 x 2.5" HS, redundant PSU models only, RAID520i/RAID720i and expansion kit is needed,								
	redundant PSU	models	only, RAI	D520i	/RAID	720i and	l expar	sion kit is needed,	
	more that 8 disk bays needs expander card.								
	Also supports one M.2 SATA SSD, 32GB or 128GB.								
Supporting disk drives	3.5" SATA HDD, 7.2K 6Gbs, HS or NHS				1TB/2TB/3TB/4TB/6TB/8TB/10TB				
	3.5" SAS HDD, 7.2K 12Gbs, HS				1TB/2TB/3TB/4TB/6TB/8TB/10TB				
	2.5" SAS HDD, 10K 12Gbs, HS, 2.5" or 3.5								
	2.5" SAS HDD, 15K 12Gbs, HS, 2.5" or 3.5			bay 300GB/600GB					
	2.5" SATA SSD, 6Gbs, HS, 2.5" or 3.5" bay			120GB/240GB/480GB/800GB/960GB					
	2.5" SATA HDD, 7.2K 6Gbs, HS			1TB/2TB 32GB/128GB					
	2.5" SATA HDD, 7.2K M.2 SATA SSD	6Gbs, HS							

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		Specification								
	Maximum internal	Up to 64TB with 8TB 3.5" SAS or SATA HDDs, 8 x 3.5" HS bay								
	storage	•								
$\dashv$	Optical drive	Two 5.25" bays. Up to 2 optical drives. DVD-ROM or DVD±RW. Half-height. 21 optical drive will be disable if M.2 SATA SSD is used								
	Tape drive	Supports one tane drive in 5.25" hav RDV or LTO LTO Tane drive no								
	Network interfaces	with Intel i210.								
	interfaces  One dedicate management port with Realtek RTL8211E  UEFI. Onboard Aspeed AST2400 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC).  Control Panel LEDs shows the status of power, disk drives, network, sys On rear system ID. Supports EasyStartup, Power Planner, Lenovo Think Diagnostics Standalone, ToolsCenter Suite CLI inventory module on Thirer, Lenovo xClarity Administrator									
	Security features	Power-on and adm	inistrator password.	Optional TPM, TCG	1.2 or 2.0 compliant.					
	Operating systems	Microsoft Windows Server 2016/2012 R2. Red Hat Enterprise Linux 6.8. VMware vSphere (ESXi) 6.0U2/6.5								
	Base warranty	1 or 3-year limited onsite service with 9x5/NBD.								
	Power supply	Supports one of the follwing, depending on models:  One fixed 300 watts, universal, 80 PLUS Bronze qualified.  Up to two redundant 450 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, universal, redundant with two power supplies								
	Graphics	Integrated in onboard Aspeed AST2400 graphics/management processor. Optional NVIDIA Quadro K420								
	Front ports	Two USB 3.0 (blue)								
	Rear ports	One VGA, four USB 3.0, one RJ-45 (dedicated mgmt), two ethernet, one serial (9-pin). Add-on parallel or serial ports via optional PCle adapters								
	Noise emissions	Operating: < 43.6 dB(A). Idle: < 33 dB(A) (Maximum configuration)								
		All models supports ASHARE B. Models with the following configuration supports ASHARE A3: Xeon E3-1230 v5/8GBx2/DVD±RW/1TB SATAx4/RAID520i/450Wx2/TPM								
			ASHRAE A2	ASHRAE A3	ASHRAE B					
-		Temperature - operating	10°C to 35°C (50°F to 95°F)	5°C to 40°C (41°F to 104°F)	5°C to 35°C (41°F to 95°F)					
	Environmental	Temperature - storage (with package)	-40°C to 60°C (-40°F to 140°F)	-40°C to 60°C (-40°F to 140°F)	-40°C to 60°C (-40°F to 140°F)					
	specification	Altitude - operating	20% to 80% (non-condensing)	8% to 85% (non-condensing)	8% to 80% (non-condensing)					
		Humidity - storage (with package)	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)					
		Altitude - operating 0 m to 3048 m (0 ft to 10 000 ft) in an unpressurized environment								
a- GREENGUARD certified, RoHS-compliant, Energy Star Server 2.1 or redundant PSU models										



4 PCIe 3.0 slots (top-down):
Slot 1: PCIe 3.0 x4, full height, full length, open-end, from PCH
Slot 2: PCIe 3.0 x16, full height, full length, from CPU
Slot 3: PCIe 3.0 x1, full height, half length, from PCH
Slot 4: PCIe 3.0 x8, full height, half length, open-end, from CPU

1. If a PCIe card is connected to slot 4, both slot 2 and slot 4 will work at PCIe x8.
2. If a discrete graphics card is used, slot 2 will work at PCIe x16 and slot 4 will be disable.

